



03C0 #3

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Gary C. Starling and Joshua N. Finger  
**Serial No.:** 09/745,605  
**Filed:** December 22, 2000  
**Docket:** 30436.43USU1  
**Title:** NOVEL IMMUNOGLOBULIN SUPERFAMILY MEMBERS OF APEX-1, APEX-2 AND APEX-3 AND USES THEREOF

**CERTIFICATE UNDER 37 CFR 1.8**

I hereby certify that this paper or fee is being deposited with the United States Postal as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on March 22, 2001.

By: *Richelle Ann Domingo*  
Name: Richelle Ann Domingo

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

We are transmitting herewith the attached:

- ☒ Transmittal sheet, in duplicate, containing Certificate under 37 CFR 1.8.
- ☒ Information Disclosure Statement (37 C.F.R. §1.97 (b)(1))
- ☒ Form 1449 (Information Disclosure Statement)
- ☒ Exhibits 1-70
- ☒ Return postcard

Please charge any additional fees or credit overpayment to Deposit Account No. 50-0306. A duplicate of this sheet is enclosed.

**MANDEL & ADRIANO**

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By: *Sarah B. Adriano*

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Customer No. 26,941



**THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Gary C. Starling and  
Joshua N. Finger  
**Examiner:** Not Yet Known  
**Serial No.:** 09/745,605  
**Group Art Unit:** Not Yet Known  
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APEX-2 AND APEX-3 AND USES THEREOF

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By:   
Richelle Ann Domingo

**INFORMATION DISCLOSURE STATEMENT (37 C.F.R. §1.97(b)(1))**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner. They are as follows:

- Bittner et al (1987) *Methods in Enzymol* 153:516-544 (Exhibit 1)
- Borrebaeck et al. (*Proc. Natl. Acad. Sci. USA* 85:3995-99 (1988) (Exhibit 2)
- Boulianne et al., *Nature* 312:643-646 (1984) (Exhibit 3)
- Brisson et al (1984) *Nature* 310:511-514 (Exhibit 4)
- Broglie et al (1984) *Science* 224:838-843 (Exhibit 5)
- Brown et. al. 1998 *J. Exp. Med.* 188:2083-2090 (Exhibit 6)
- Capechi, *Science* (1989) 244:1288-1292 (Exhibit 7)

Cocks, B. G., *et al* 1995 *Nature* 376:260-263 (Exhibit 8)

- Colbere-Garapin, F. et al (1981) *J Mol Biol* 150:1-14 (Exhibit 9)
- Coruzzi et al (1984) *EMBO J* 3:1671-1680 (Exhibit 10)
- D'Eustachio et al. (1983) *Science* 220:919-924 (Exhibit 11)
- De la Fuente, Miguel Angel et al., "CD84 Leukocyte Antigen is a New Member of the Ig Superfamily," *Blood*, September 15, 1997, 90:2398-2405. (Exhibit 12)
- Dustin, Michael L. and Timothy A. Springer, "Role of Lymphocyte Adhesion Receptors in Transient Interactions and Cell Locomotion," *Ann. Rev. Immunol.*, 1991, 9:27-66. (Exhibit 13)
- Engelhard E K et al (1994) *Proc Nat Acad Sci* 91:3224-7 (Exhibit 14)
- Fan et al. (1990) *Proc. Natl. Acad. Sci. USA* 87: 6223-27 9Exhibit 15)
- Fell et al., *Proc. Natl. Acad. Sci. USA* 86:8507-8511 (1989) (Exhibit 16)
- Fields, S. and Song, O. (1989) *Nature* 340:245-246 (Exhibit 17)
- G. J. Hannon, et al. (1993) *Genes and Dev.* 7: 2378-2391 (Exhibit 18)
- Goodchild, P. C., et al., 1986 *Proc. Natl. Acad. Sci.* 83:4143-4146 (Exhibit 19)
- H. Dugas and C. Penney, 1981 in: *Bioorganic Chemistry*, Springer-Verlag, New York, pp 54-92 (Exhibit 20)
- H. Liu et al. *Cancer Research* 58: 4055-4060 (1998) (Exhibit 21)
- Harrington, J.J. et al. (1997) *Nat. Genet.* 15:345-355) (Exhibit 22)
- Hartman, S. C. and R. C. Mulligan (1988) *Proc Natl Acad Sci* 85:8047-51 (Exhibit 23)
- Haselhoff and Gerlach (1988) *Nature* 334:585-591 (Exhibit 24)

- Hollenbaugh et al., *J. Immunol. Methods* (1995) 188: 1-7 (Exhibit 25)
- J. P. Manfredi, et al. (1996) *Molec. And Cell. Biol.* 16: 4700-4709 (Exhibit 26)
- Logan and Shenk (1984) *Proc Natl Acad Sci* 81:3655-59 (Exhibit 27)
- Lonberg and Haszar (1995, *Int. Rev. Immunol.* 13:65-93 (Exhibit 28)
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- M. Yang, et al. (1995) *Nucleic Acids Res.* 23: 1152-1156 (Exhibit 30)
- Morrison, S.L. et al. (1984) *Proc. Natl. Acad. Sci.* 81, 6851-6855 (Exhibit 31)
- Neuberger, M.S. et al. (1984) *Nature* 312, 604-608 (Exhibit 32)
- Nielsen, P. E. et al. 1993 *Anticancer Drug Des*, 8:53-63 (Exhibit 33)
- P. C. Zamecnik, et al., 1978 *Proc. Natl. Acad. Sci.* 75:280-284 (Exhibit 34)
- Rost, B., and Sander, C. 1994 *Proteins* 19:55-72 (Exhibit 35)
- Sahagan et al., *J. Immunol.* 137:1066 (1986) (Exhibit 36)
- Schwarz et al. (1996) *Gene Ther.* 3:405-411 (Exhibit 37)
- Sharon et al., *Nature* 309:364 (1984) (Exhibit 38)
- Smith et al (1983) *J Virol* 46:584 (Exhibit 39)
- Songyang, Z., et al 1993 *Cell* 72:767-778 (Exhibit 40)
- Songyang, Z., et al., (1994) *Molec. Cell. Biol.* 14:2777-2785 Exhibit 41)
- Starling, G.C et. al. (1996) *Eur. J. Immunol.* 26:738-46 (Exhibit 42)

Tabata et al., *Cardiovasc. Res.* (1997) 35:470-479 (Exhibit 43)

- Takamatsu et al (1987) *EMBO J* 6:307-311 (Exhibit 44)
- Takeda, S. et al. (1985) 314, 452-454 (Exhibit 45)
- Tan et al., *J. Immunol.* 135:3565-3567 (1985) (Exhibit 46)
- Tangye, S. G., et al 1999 *J. Immunol.* 162:6981-6985 (Exzhibit 47)
- Thompson et al., *Cell* (1989) 5:313-321 (Exhibit 48)
- Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", *Immunol. Rev.*, 62:119-58 (1982) (Exhibit 49)
- Van Heeke & Schuster (1989) *J Biol Chem* 264:5503-5509 (Exhibit 50)
- Vitetta, E.S. et al., 1993 "Immunotoxin Therapy", in DeVita, Jr., V.T. et al., eds, *Cancer: Principles and Practice of Oncology*, 4th ed., J.B. Lippincott Co., Philadelphia, 2624-2636 (Exhibit 51)
- Wigler, M. et al (1977) *Cell* 11:223-32 (Exhibit 52)
- Wigler, M. et al (1980) *Proc Natl Acad Sci* 77:3567-70 (Exhibit 53)
- Williams, A. F. and Barclay, A. N., 1988 *Ann. Rev. Immunol.* 6:381-405 (Exhibit 54)
- Wingren, A. G., et al 1995 *Critical Reviews in Immunology* 15:235-253 (Exhibit 55)
- Winter, G. et al. (1991) *Nature* 349, 293-299 (Exhibit 56)

Wolff et al. (1997) *Neuromuscul. Disord.* 7:314-318 (Exhibit 57)

- U.S. Patent Application No. 5,705,151 (Exhibit 58)
- U.S. Patent Application No. 4,683,202 (Exhibit 59)
- U.S. Patent Application No. 4,965,188 (Exhibit 60)
- U.S. Patent Application No. 5,110,802 (Exhibit 61)
- U.S. Patent Application No. 5,194,428 (Exhibit 62)
- U.S. Patent Application No. 5,539,082 (Exhibit 63)
- U.S. Patent Application No. 5,545,806 (Exhibit 64)
- U.S. Patent Application No. 5,569,825 (Exhibit 65)
- U.S. Patent Application No. 5,580,859 (Exhibit 66)
- U.S. Patent Application No. 5,625,126 (Exhibit 67)
- U.S. Patent Application No. 5,633,425 (Exhibit 68)
- U.S. Patent Application No. 5,661,016 (Exhibit 69)
- U.S. Patent Application No. 5,693,622 (Exhibit 70)

This statement should be considered because it is submitted before the mailing date of the first Office Action on the merits under 37 C.F.R. § 1.97(b)(1). In accordance with 37 C.F.R. §1.98(a)(2)(i)(ii), copies of each document or other information listed on the enclosed Form 1449 are provided.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that the references have been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked as being considered and initialed by the Examiner, to the undersigned with the next official communication.

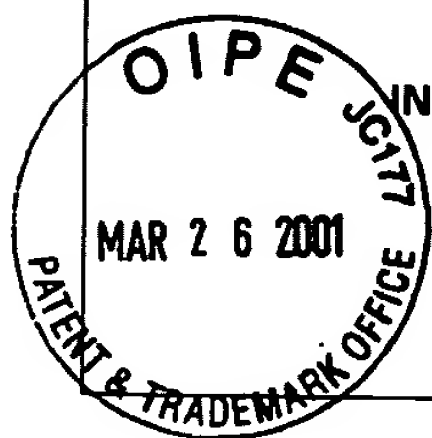
No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 50-0306.

Respectfully submitted,

Sarah B. Adriano

Sarah B. Adriano  
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FORM 1449\*



# INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION

(Use several sheets if necessary)

Docket Number

30436.43USU1

Application Number

09/745,605

Applicant

Gary C. Starling and Joshua N. Finger

Filing Date

December 22, 2000

Group Art Unit

Not yet known

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,705,151	January 6, 1998 (Exhibit 58)	Dow et al.			
	4,683,202	July 28, 1987 (Exhibit 59)	Mullis			
	4,965,188	October 23, 1990 (Exhibit 60)	Mullis et al.			
	5,110,802	May 5, 1992 (Exhibit 61)	Cantin et al.			
	5,194,428	March 16, 1993 (Exhibit 62)	Agrawal et al.			
	5,539,082	July 23, 1996 (Exhibit 63)	Nielsen et al.			
	5,545,806	August 13, 1996 (Exhibit 64)	Lonberg et al.			
	5,569,825	October 29, 1996 (Exhibit 65)	Lonberg et al.			
	5,580,859	December 3, 1996 (Exhibit 66)	Felgner et al.			
	5,625,126	April 29, 1997 (Exhibit 67)	Lonberg et al.			
	5,633,425	September 2, 1997 (Exhibit 68)	Detroit et al.			
	5,661,016	August 26, 1997 (Exhibit 69)	Lonberg et al.			
	5,693,622	December 2, 1997 (Exhibit 70)	Wolff et al.			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/	Bittner et al (1987) <i>Methods in Enzymol</i> 153:516-544 (Exhibit 1)
/	Borrebaeck et al. ( <i>Proc. Natl. Acad. Sci. USA</i> 85:3995-99 (1988) (Exhibit 2)
/	Boulianne et al., <i>Nature</i> 312:643-646 (1984) (Exhibit 3)
/	Brisson et al (1984) <i>Nature</i> 310:511-514 (Exhibit 4)
/	Broglie et al (1984) <i>Science</i> 224:838-843 (Exhibit 5)
/	Brown et. al. 1998 <i>J. Exp. Med.</i> 188:2083-2090 (Exhibit 6)
/	Capechi, <i>Science</i> (1989) 244:1288-1292 (Exhibit 7)
/	Cocks, B. G., et al 1995 <i>Nature</i> 376:260-263 (Exhibit 8)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

\*Substitute Disclosure Statement Form (PTO-1449)

Patent and Trademark Office ; U.S. DEPARTMENT OF COMMERCE





FORM 1449\*

**INFORMATION DISCLOSURE STATEMENT  
IN AN APPLICATION**

(Use several sheets if necessary)

Docket Number

30436.43US11

Application Number

09/745,605

Applicant

Gary C. Starling and Joshua N. Finger

Filing Date

December 22, 2000

Group Art Unit

Not yet known

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	Colbere-Garapin, F. et al (1981) <i>J Mol Biol</i> 150:1-14 (Exhibit 9)
	Coruzzi et al (1984) <i>EMBO J</i> 3:1671-1680 (Exhibit 10)
	D'Eustachio et al. (1983) <i>Science</i> 220:919-924 (Exhibit 11)
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	J. P. Manfredi, et al. (1996) <i>Molec. And Cell. Biol.</i> 16: 4700-4709 (Exhibit 26)
	Logan and Shenk (1984) <i>Proc Natl Acad Sci</i> 81:3655-59 (Exhibit 27)
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	M. Yang, et al. (1995) <i>Nucleic Acids Res.</i> 23: 1152-1156 (Exhibit 30)
	Morrison, S.L. et al. (1984) <i>Proc. Natl. Acad. Sci.</i> 81, 6851-6855 (Exhibit 31)
	Neuberger, M.S. et al. (1984) <i>Nature</i> 312, 604-608 (Exhibit 32)
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<b>FORM 1449*</b>  <b>INFORMATION DISCLOSURE STATEMENT</b> <b>IN AN APPLICATION</b>  (Use several sheets if necessary)	<b>Docket Number</b> 30436.43US11	<b>Application Number</b> 09/745,605
	<b>Applicant</b> Gary C. Starling and Joshua N. Finger	
	<b>Filing Date</b> December 22, 2000	<b>Group Art Unit</b> Not yet known

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	*	Schwarz et al. (1996) <i>Gene Ther.</i> 3:405-411 (Exhibit 37)
		Sharon et al., <i>Nature</i> 309:364 (1984) (Exhibit 38)
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